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(71) Applicant(s)

**Fernsoft (UK) Limited**

**(Incorporated in the United Kingdom)**

**19 Shrewsbury Mews, LONDON, W2 5BN,  
United Kingdom**

(72) Inventor(s)

**Sean Campbell**

**Marion Edsor**

**John Herd**

(74) Agent and/or Address for Service

**Forrester Ketley & Co**

**Forrester House, 52 Bounds Green Road, LONDON,  
N11 2EY, United Kingdom**

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(54) **Skin care composition comprising sunscreen, humectant and exfoliant**

(57) **Cosmetic skin care composition comprising a sunscreen e.g. octylmethoxy cinnamate, emollient e.g. glyceryl stearate, humectant e.g. glycerin, anti-oxidant e.g. Vitamins A/C/E, exfoliant e.g.  $\alpha$ -hydroxy acids from fruit extract, bodifier e.g. cetyl alcohol, emulsifier e.g. sorbitan stearate, preservative e.g. propyl paraben, sequestering agent e.g. disodium EDTA, delivery agent, e.g. phytantriol and water.**

**Vitamins A and C may be in liposomal form.**

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Title: "Cosmetic product"

THE PRESENT INVENTION relates to a cosmetic product and, more particularly, to a formulation for cosmetic treatment of human skin.

The field of cosmetic skin care is one that has provided intense investigation for centuries. There are currently available a wide number of skin care products. These have many different functions, from skin cleaning to skin moisturization.

The interest in such formulations stems from the human desire to appear attractive and, therefore, to care for the appearance. This, coupled with the desire to, as far as possible, prevent the outward signs of ageing, leads to the market for skin care products being a very large one.

A superior skin care product should have several properties. First and foremost, such a product should provide moisture to the skin. This may be achieved by several different approaches, for example, by maintaining the integrity of the outermost layer of skin cells, the stratum corneum, by controlling transepidermal water loss, or by ensuring that the skin obtains sufficient vitamins so as to maintain anti-oxidation properties, collagen production and rate of mitosis.

Further desired properties of a skin care product include the reduction in pigmentation spots on the skin, healing of damaged skin cells and screening from UV

radiation. Ideally such a skin formulation should also be anti-allergenic.

According to the present invention, there is provided a stable skin care composition comprising a sunscreen, humectant, exfoliant, emulsifier, preservative and water.

Preferably, the composition comprises from 0.5 to 30.0 parts by weight of sunscreen, 10.0 to 25.0 parts by weight emollient, 1.0 to 20.0 parts by weight humectant, 1.0 to 30.0 parts by weight exfoliant, 1.0 to 35.0 parts by weight anti-oxidant, 1.0 to 10.0 parts by weight bodifier, 1.0 to 10.0 parts by weight emulsifier, 1.0 to 20.0 parts by weight moisturiser, 0.1 to 1.0 parts by weight preservative, 0.05 to 0.5 parts by weight sequestering agent, 0.1 to 1.0 parts by weight delivery agent and 30.0 to 70.0 parts by weight water.

More preferably the composition comprises 10.5 to 20.0 parts by weight sunscreen, 12.5 to 19.5 parts by weight emollient, 5.0 to 10.0 parts by weight humectant, 9.0 to 19.0 parts by weight exfoliant, 10.0 to 22.4 parts by weight antioxidant, 2.0 to 5.0 parts by weight bodifier, 2.5 to 6.0 parts by weight emulsifier, 4.2 to 12.5 parts by weight moisturiser, 0.3 to 0.8 parts by weight preservative, 0.1 to 0.3 parts by weight sequestering agent, 0.2 to 0.5 parts by weight delivery agent and 47.0 to 55.0 parts by weight water.

Preferably the sunscreen comprises at least one of octyl methoxycinnamate and benzophenone-3.

Preferably the emollient comprises at least one of mineral oil, glyceryl stearate, Peg-100 stearate, Vitamin B5 and evening primrose oil.

Preferably the Vitamin B5 is in the form of D-panthenol, most preferably contained in wheatgerm oil.

Preferably the humectant is glycerin.

It is preferred that the exfoliant is an alphahydroxy acid, for example a melon extract or mixed fruit extract.

It is preferred that the anti-oxidant is a free radical scavenger preferably comprising at least one of superoxide dismutase, Vitamin A, Vitamin E, Vitamin C and BHA.

Preferably the percentage by weight of BHA is from 0.09 to 0.11, and most preferably is 0.10.

Preferably the superoxide dismutase is provided as a mixture of water, lecthin and superoxide dismutase.

Preferably the Vitamin E is present as at least one of tocopheryl acetate and tocopheryl linoleate, preferably in the form of both.

Preferably the Vitamin A is in the form of retinyl palmitate.

Preferably the Vitamin C is in the form of ascorbyl polypeptide.

Preferably the bodifier comprises cetyl alcohol.

Preferably the emulsifier comprises at least one of sorbitan stearate and Peg-40 stearate.

It is preferred that the emulsifier comprises glycerylstearate-Peg-100 stearate, sorbitan stearate and Peg-40 stearate. Preferably their percentages by weight are from 2.7 to 3.3, 1.35 to 1.65 and 0.9 to 1.1 respectively, and most preferably 3.0, 1.5 and 1.0 respectively.

Preferably the moisturiser comprises at least one of lysine PCA, aloe extract, lauryl PCA, sodium hyaluronate and phytantriol.

It is preferred that the preservative comprises at least one of imidazolidinyl urea, methyl paraben and propyl paraben. Preferably their percentages by weight are from 0.27 to 0.33, 0.14 to 0.17 and 0.90 to 1.10 respectively and most preferably 0.3, 0.15 and 1.0 respectively.

It is preferred that the sequestering agent is disodium EDTA. Preferably at a percentage by weight from 0.09 to 0.11 and most preferably 0.1.

Preferably the composition of the present invention comprises a composition comprising 5.0 to 15.0 parts by weight octyl methoxycinnamate, to 15.0 parts by weight mineral oil, 1.0 to 15.0 parts by weight glycerine, 1.0 to 15.0 parts by weight melon extract, 1.0 to 15.0 parts by weight water / lecithin / superoxide dismutase composition, 1.0 to 15.0 parts by weight mixed fruit extract, 1.0 to 10.0 parts by weight glyceryl stearate and/or Peg-100 stearate, 1.0 to 15.0 parts by weight benzophenone-3, 1.0 to 10.0 parts by weight tocopheryl acetate, 1.0 to 10.0 parts by weight cetyl alcohol, 0.55 parts by weight sorbitan stearate, 0.5 to 5.0 parts by weight Peg-40 stearate, 0.5 to 5.0 parts by weight retinyl palmitate, 0.5 to 5.0 parts by weight tocopheryl linoleate, 0.5 to 5.0

parts by weight lysine PCA, 0.5 to 5.0 parts by weight aloe extract, 0.5 to 5.0 parts by weight lauryl PCA, 0.5 to 5.0 parts by weight wheatgerm oil, 0.1 to 2.0 parts by weight evening primrose oil, 0.1 to 2.0 parts by weight ascorbyl polypeptide, 0.1 to 1.0 parts by weight imidazolidinyl urea, 0.1 to 1.0 part per weight phytantriol, 0.05 to 1.0 disodium EDTA, 0.05 to 1.0 part per weight BHA, 0.5 to 5.0 parts by weight sodium hyaluronate and 32.70 parts by weight water.

Most preferably the composition comprising 7.5 to 12.0 parts by weight octyl methoxycinnamate, 8.0 to 10.0 parts by weight mineral oil, 5.0 to 10.0 parts by weight glycerin, 5.0 to 10.0 parts by weight melon extract, 5.0 to 10.0 parts by weight water / lecthin / superoxide dismutase composition, 4.0 to 9.0 parts by weight mixed fruit extract, 3.0 to 5.0 parts by weight gluceryl stearate and/or Peg-100 stearate, 3.8 parts by weight benzophenone-3, 2.5 to 5.0 parts by weight tocopheryl acetate, 2.0 to 5.0 parts by weight cetyl alcohol, 1.5 to 3.0 parts by weight sorbitol stearate, 1.0 to 3.0 parts by weight sorbitol stearate, 1.0 to 3.0 parts by weight peg-40 stearate, 1.0 to 3.0 parts by weight retinyl palmitate, 1.0 to 3.0 parts by weight tocopheryl linoleate, 1.0 to 3.0 parts by weight lysine PCA, 1.0 to 3.0 parts by weight aloe extract, 1.0 to 3.0 parts by weight lauryl PCA, 1.0 to 3.0 parts by weight wheatgerm oil, 0.5 to 1.5 parts by weight evening primrose oil, 0.4 to 1.0 part per weight ascorbyl polypeptide, 0.3 to 0.8 parts by weight imidazolidinyl urea, 0.2 to 0.5 parts by weight phytantriol, 0.1 to 0.3 disodium EDTA, 0.1 to 0.4 parts by weight BHA, 1.0 to 3.0 parts by weight sodium hyaluronate and 47.0 to 55.0 parts by weight water.

The composition of the present invention is hypo-allergenic and serves to moisturise and cosmetically improve the skin in several ways.

According to the present invention there is further provided a method of cosmetic treatment of skin comprising applying to skin a composition according to the present invention.

According to the present invention there is still further provided a composition according to the present invention for use as a medicament, preferably for the treatment of damaged skin.

The composition of the present invention and method of using same allows for preservation and renewal of skin cells, thickening of the skin, increase in collagen production thereby reducing wrinkles, prevention of excess of moisture loss and anti-oxidation. One of the problems encountered in prior art compositions is the problem of delivery of ingredients to the appropriate skin layer as well as the stabilisation of said ingredients. In the present invention, delivery of the ingredients is solved by the use of a delivery agent, preferably phytantriol. The use of phytantriol allows all the ingredients of the composition to be drawn deep into the skin. Phytantriol is particularly preferred because it also has moisturising and emollient properties.

Furthermore, both Vitamin A, in the form of retinyl palmitate, the evening primrose oil and Vitamin C are all delivered in the form of liposomes. This allows greater stability of these ingredients as well as allowing much greater ease of delivery to the deeper layers of the skin.

Furthermore, the delivery of Vitamin C in the form of liposomes allows the Vitamin C to penetrate as deeply as the Vitamin A and, therefore, allows the Vitamin C to stabilise the Vitamin A. The Vitamin A is further stabilised by Vitamin E. In this respect, Vitamin E is preferably provided in the form of tocopheryl linoleate, the linoleate being of a form to allow easy absorption into the skin by its increased fat solubility.

In this respect it should be noted that oral ingestion of vitamins is a poor way to deliver vitamins to the skin. However, until recently, there was no other way of delivering vitamins to the deeper layers of the skin because of the inherent water solubility of Vitamins A, C and E and, therefore, their inability to penetrate the deeper layers of skin. By encasing these vitamins in liposomes and, therefore, effectively making them fat soluble, deep penetration by these vitamins into the skin has been achieved, allowing effective vitamin delivery to the skin.

It is preferred that the composition of the present invention comprises a UV absorber to act as a sunscreen. The most preferred compound in this respect is octyl methoxycinnamate or benzophenone-3.

A number of emollients may be used to cause the cells to remain plump for longer. Such emollients include mineral oil, glyceryl stearate, Peg-100 stearate and evening primrose oil. In this respect, glyceryl monostearate also acts as a thickening agent and emulsifier. The thickened skin causes less moisture loss and, therefore, reduces contraction of collagen supporting the skin so as to prevent wrinkles.



Vitamin B5 is preferably applied in the form of D-panthenol contained in wheatgerm oil. This also acts as an emollient but, further, has been shown to heal damaged skin cells to restore strength to the previously damaged skin.

The humectant in the composition according to the present invention is preferably glycerin, 1, 2, 3 propane triol, which softens skin. The humectant aids in the process of setting up protective barriers to prevent damage to the skin.

It is preferred that alpha-hydroxyl acids are used as exfolliants to encourage decarotenisation of the skin and, thereby, increase skin softening. It is preferred that such alpha-hydroxy acids be provided in natural form, such as melon extract or mixed fruit extract. The use of alpha-hydroxy acids in relatively mild concentrations (10%) have been shown to soften the skin rapidly and increase skin sensitivity.

Cetyl alcohol is the preferred bodifier.

It is important that the composition of the present invention is an emulsion to encourage absorption into the skin. The preferred emulsification system, efficient in stabilising the remaining ingredients comprises glyceryl stearate-peg-100 stearate, sorbitan stearate and peg-40 stearate.

Several of the ingredients of the composition are relatively unstable such as, for example, the vitamins and their derivatives and the fruit extracts. For this reason, it is preferred that the composition be made with a preservative which may be selected from the group of methyl

paraben, propyl paraben and imidazolidinyl urea. Imidazolidinyl urea also has anti-oxidant properties.

The composition according to the present invention should have a sequestering agent, preferably Disodium EDTA.

Of course, a cosmetic skin care composition, the main function of which is to moisturise the skin should have, as a component, a moisturiser. In the present invention it is preferred that the moisturising component of the composition comprises at least one of lysine PCA, aloe extract, lauryl PCA, phytantriol and sodium hyaluronate. These compounds moisturise the skin. Furthermore, lysine PCA and lauryl PCA draw oxygen into the skin thereby ensuring that the skin is fully oxidated to decrease the rate of skin cell death. Hyaluronate acid provides a surface barrier, preventing moisture from escaping the skin whilst still allowing the skin to breathe. In this respect, sodium hyaluronate is capable of absorbing and holding more water than any other natural or synthetic polymer known today. When applied to the skin's surface it forms an extremely thin elastic film very similar to the natural keratin film on skin. This film is permeable to oxygen and yet provides an effective seal against moisture loss.

As described above, phytantriol is not only important as a moisturiser but, even more importantly, as a delivery vehicle to allow delivery of Vitamin A in liposome form to the cells of the skin.

Probably the most important component of the composition of the present invention, however, is the anti-oxidant component. This component comprises several anti-oxidants and free-radical scavengers which may include

superoxide dismutase, BHA, Vitamin A, Vitamin C and Vitamin E. These are natural ingredients, the main function of which is to quench free radicals caused by spontaneous ionisation of compounds within the cells. Free radicals produced by such spontaneous ionisation are thought to be a major cause of the ageing process, causing cellular damage and eventually breakdown. These natural free radical scavengers are compounds which react with the free radicals so as to prevent the free radicals reacting with any other compound and, particularly, to prevent potentially damaging chain reactions within the cell.

The Vitamins A, C and E also have extremely important secondary effects as well as their primary effect of free radical scavaging.

Vitamin A, delivered in liposomes in the form of retinyl palmitate, has the effect of stimulating mitosis in the germinative layers of the skin. This increase in cell duplication increases the thickness of the skin so as to cause increased moisture retention and decreased collagen contraction, leading to a decrease in wrinkles. It is thought that retinyl palmitate in the skin is converted to retinoic acid. This is thought to prevent connective tissue atrophy and to regenerate connective tissue to aid dermal repair in response to UV damage. This allows an accumulation of collagen in the skin to aid repair of the skin. The increased mitotic effects observed when Vitamin A is applied give the more youthful looking skin because the stimulatory effects of the vitamin tend to oppose those changes that occur with ageing. The skin is activated to produce more epidermal protein and form a thicker epidermis which is covered by a better formed keratin layer. Furthermore, the elasticity of the skin is increased.

Vitamin A also stimulates dermal repair in response to UV damage, particularly after exposure to the sun.

The advantages of applying Vitamin A in liposomes is not only the greater effectiveness in delivery, as discussed above. Vitamin A can sometimes lead to sensitivity in some users. However, the use of liposomes, prevents direct contact with Vitamin A and the outer layer of the skin thus avoiding such sensitisation. Furthermore, the use of liposomes for delivery of Vitamin A allows an extended and progressive release time for the Vitamin A.

Until recently, retinyl palmitate was up to 25% oxidised within four weeks of production. It is, therefore, preferable that at least one of Vitamins C and E be incorporated into the present composition for their further advantageous property as anti-oxidants, preventing the oxidation and decomposition of the retinyl palmitate.

Vitamin C, too, has several other advantageous properties over and above its free radical scavenging. Vitamin C causes melanin dispersion and, therefore, aids in the reduction or elimination in brown pigmentation spots, associated with ageing, on the surface of the skin. Furthermore, Vitamin C, closely associated with wound healing, has been found to stimulate collagen synthesis, vital for maintaining skin tone. Vitamin C is also known for its sunscreen properties. It should be noted that Vitamin C is preferentially depleted from the skin by the body, from the skin in order to sustain other bodily functions. It is, therefore, very important to ensure that the skin is properly supplied with the Vitamin C.

Vitamin E also has many advantageous properties other than its free-radical scavaging. It is a well-known

anti-oxidant and, as such, acts as an anti-oxidising preservative in the composition itself. Furthermore, Vitamin E stimulates an increase in protein, DNA and acylglycosyl ceramide production. Vitamin E is a lipid soluble oxidant as opposed to Vitamin C which is a water soluble anti-oxidant. Vitamin E is also an effective sunscreen, acting against sunburn created by UVB radiation. Vitamin E has been found to reduce skin roughness and facial lines and wrinkles.

Vitamin E may be used in one or both of two preferred forms. The first preferred form is tocopheryl linoleate. It is preferred that this is manufactured using gamma linolenic acid, which is derivable from evening primrose oil. This acid supplements the lipids which underlie and support the skin, penetrating deeply into the skin and storing within the cell walls to ensure that the cells stay plump for longer. Furthermore, the linolenic acid, on its own, may be irritating but Vitamin E linoleate is non-toxic and allows the Vitamin E to be easily absorbed whilst allowing the linoleic acid to have its own advantageous effects without irritation. Vitamin E linolate also reduces the transepidermal water loss. Linolenic acid is an essential fatty acid and, therefore, tocopheryl linoleate aids in correcting essential fatty acid deficiencies.

The alternative form of Vitamin E is Vitamin E acetate or tocopheryl acetate. This also reduces transepidermal water loss, appearing to moisturise from within as opposed to having a occlusive effect. Vitamin E acetate accumulates in the stratum corneum and, after natural conversion by the skin enzymes, is incorporated into the lipid bilayers so as to repair the intracellular moisturising barrier of the skin.

Vitamins A, C and E also have two other major effects. Along with gamma linolenic acid, these three vitamins prevent a decrease in sebaceous and sweat gland production by retarding sebaceous glands from their natural decrease in production with age.

Of more importance is the particular anti-oxidation effects at the border of the dermis and the epidermis which is the area in which the chief production of skin cancer appears to take place. Accordingly, Vitamins A, C and E would appear to be of major prophylactic use in the prevention of skin cancer.

The composition of the present invention may also comprise artificial or natural colour in small concentrations, for example from 0.1 to 0.2 parts by weight. Yellow number 6FD and C and red number 40FD and C may be used in this respect.

A skin care composition according to the present invention was prepared.

To prepare the composition, de-ionised water was passed into a 200 gallon steam jacketed kettle fitted with a motorized stirrer. Glycerin, EDTA disodium de-panthenol, aloe vera and methyl parabin were added.

In a second vessel, glyceryl stearate, Peg-100 stearate, sorbitan stearate, mineral oil, lauryl PCA, cetyl alcohol, BHA, evening primrose oil, propyl paraben, wheatgerm oil, octyl methoxycinnamate, benzophenon-3 and Peg-40 stearate were mixed with a mechanical stirrer in a similar steam jacketed kettle whilst being heated to 70°C. After about 20 minutes of heating and stirring the second mixture was removed from the second steam jacketed kettle

and added to the first mixture, with stirring. An emulsion was formed and was subsequently stirred whilst cooling to 45-50°C.

In a third, separate vessel, phytentriol, tocopheryl linoleate, tocopheryl acetate and retinyl palmetate were mixed. The third mixture was then added to the emulsion formed between the first and second mixture with stirring. The subsequent emulsion was cooled, whilst stirring, to 35°C.

A fourth mixture combining water, ascorbyl polypeptide, imidazolidinyl urea, sodium hyaluronate, lysine PCA, mixed fruit extracts, melon extract and water / lecthin / superoxide dismutase were mixed. This fourth mixture was added, at 35°C, to the emulsion formed by the previous three mixtures and the emulsion was mixed until uniform to form the product for use. A small amount (approximately a quarter of an ounce) of this product was completely massaged into human facial skin for a period of one to two minutes daily. After two weeks of such daily use, re-vitalisation of the treated skin can be seen, incorporating improvement of skin texture, colour and clarity and reduction in fine lines.

The composition of the present invention is simply massaged into the facial skin to preserve and renew the vitality of the skin cells. Daily massage of the composition into the skin maintains the health, elasticity and vitality of the skin, reduces or eliminates blemishes and brown spots, stimulates the sebaceous glands and tones the skin. Its softens, smooths and stimulates the skin and combines, with the massaging effect, to assist circulation in the skin. Continued use of the composition prevents

excessive moisture loss and aids growth and health of the skin.



## CLAIMS

1. A stable skin care composition comprising a sunscreen, humectant, exfoliant, emulsifier, preservative and water.

2. A composition according to Claim 1 comprising from 5.0 to 30.0 parts by weight of sunscreen, 10.0 to 25.0 parts by weight emollient, 1.0 to 20.0 parts by weight humectant, 1.0 to 30.0 parts by weight exfoliant, 1.0 to 35.0 parts by weight anti-oxidant, 1.0 to 10.0 parts by weight bodifier, 1.0 to 10.0 parts by weight emulsifier, 1.0 to 20.0 parts by weight moisturiser, 0.1 to 1.0 parts by weight preservative, 0.05 to 0.5 parts by weight sequestering agent, 0.1 to 1.0 parts by weight delivery agent and 30.0 to 70.0 parts by weight water.

3. A composition according to Claim 1 or 2 comprising 10.5 to 20.0 parts by weight sunscreen, 12.5 to 19.5 parts by weight emollient, 5.0 to 10.0 parts by weight humectant, 9.0 to 19.0 parts by weight exfoliant, 10.0 to 22.4 parts by weight antioxidant, 2.0 to 5.0 parts by weight bodifier, 2.5 to 6.0 parts by weight emulsifier, 4.2 to 12.5 parts by weight moisturiser, 0.3 to 0.8 parts by weight preservative, 0.1 to 0.3 parts by weight sequestering agent, 0.2 to 0.5 parts by weight delivery agent and 47.0 to 55.0 parts by weight water.

4. A composition according to any preceding claim wherein the sunscreen comprises octyl methoxycinnamate or benzophenone-3.

5. A composition according to any preceding claim, wherein the emollient comprises mineral oil, glyceryl

stearate, Peg-100 stearate, Vitamin B5 or evening primrose oil.

6. A composition according to Claim 5 wherein the emollient comprises Vitamin B5.

7. A composition according to Claim 6 wherein the Vitamin B5 is in the form of D panthenol.

8. A composition according to Claim 7, wherein the depanthenol is incorporated in wheatgerm oil.

9. A composition according to any one of the preceding claims wherein the humectant comprises glycerin.

10. A composition according to any one of the preceding claims wherein the exfoliant comprises an alphahydroxy acid.

11. A composition according to Claim 10 wherein the alphahydroxy acid is contained in melon extract or mixed fruit extracts.

12. A composition according to any one of the preceding claims wherein the antioxidant comprises superoxide dismutase, BHA, Vitamin E, Vitamin A or Vitamin C.

13. A composition according to Claim 12, wherein the antioxidant comprises BHA.

14. A composition according to Claim 13, wherein the percentage by weight of BHA is from 0.09 to 0.11.

15. A composition according to Claim 14, wherein the percentage by weight of BHA is 0.10.

16. A composition according to Claim 12, wherein the antioxidant is Vitamin E.

17. A composition according to Claim 16 wherein the Vitamin E is in the form of tocopheryl acetate or tocopheryl linoleate.

18. A composition according to any of Claims 12 to 17 wherein the antioxidant comprises Vitamin C.

19. A composition according to Claim 18 wherein the Vitamin C is in the form of ascorbyl polypeptide.

20. A composition according to any one of Claims 11 to 19 wherein the antioxidant comprises Vitamin A.

21. A composition according to Claim 20, wherein the vitamin A is in the form of retinyl palmitate.

22. A composition according to any one of the preceding claims wherein the bodifier is cetyl alcohol.

23. A composition according to any one of the preceding claims wherein the emulsifier comprises sorbitan stearate or Peg-40 stearate.

24. A composition according to Claim 23, wherein the emulsifier comprises glyceryl stearate-Peg-100 stearate, sorbitan stearate and Peg-40 stearate.

25. A composition according to Claim 24, wherein the percentage by weight of glyceryl stearate-Peg-100 stearate is from 2.7 to 3.3.

26. A composition according to Claim 25, wherein the percentage by weight of glyceryl stearate-Peg-100 stearate is 3.0.

27. A composition according to any one of Claims 24 to 26, wherein the percentage by weight of sorbitan stearate is from 1.35 to 1.65.

28. A composition according to Claim 27 wherein the percentage by weight of sorbitan stearate is 1.5.

29. A composition according to any one of Claims 24 to 28 wherein the percentage by weight of Peg-40 stearate is from 0.9 to 1.1.

30. A composition according to Claim 29 wherein the percentage by weight of Peg-40 stearate is 1.0.

31. A composition according to any one of the preceding claims wherein the moisturiser comprises lysine PCA, aloe extract, lauryl PCA or sodium hyaluronate.

32. A composition according to any one of the preceding claims wherein the preservative comprises imidazolidinyl urea.

33. A composition according to Claim 32 wherein the preservative comprises propyl paraben, methyl paraben and imidazolidinyl urea.

34. A composition according to Claim 33, wherein the percentage by weight of propyl paraben is from 0.90 to 1.10.

35. A composition according to Claim 34 wherein the percentage by weight of propyl paraben is 0.1.
36. A composition according to any one of Claims 33 to 35, wherein the percentage by weight of methyl paraben is from 0.14 to 0.17.
37. A composition according to Claim 36, wherein the percentage by weight of methyl paraben is 0.15.
38. A composition according to any one of Claims 33 to 37, wherein the percentage by weight of imidazolidinyl urea is from 0.27 to 0.33.
39. A composition according to any one of Claims 38, wherein the percentage by weight of imidazolidinyl urea is 0.30.
40. A composition according to any one of the preceding claims wherein the sequestering agent comprises disodium EDTA.
41. A composition according to Claim 40, wherein the percentage by weight of disodium EDTA is from 0.09 to 0.11.
42. A composition according to Claim 41, wherein the percentage by weight of disodium EDTA is 0.10.
43. A composition according to any one of the preceding claims wherein the delivery agent comprises phytantriol.
44. A composition according to any one of the preceding claims comprising 5.0 to 15.0 parts by weight octyl methoxycinnamate, to 15.0 parts by weight mineral oil, 1.0 to 15.0 parts by weight glycerine, 1.0 to 15.0 parts by

weight melon extract, 1.0 to 15.0 parts by weight water / lecthin / superoxide dismutase composition, 1.0 to 15.0 parts by weight mixed fruit extract, 1.0 to 10.0 parts by weight glyceryl stearate and/or Peg-100 stearate, 1.0 to 15.0 parts by weight benzophenone-3, 1.0 to 10.0 parts by weight tocopheryl acetate, 1.0 to 10.0 parts by weight cetyl alcohol, 0.55 parts by weight sorbitan stearate, 0.5 to 5.0 parts by weight Peg-40 stearate, 0.5 to 5.0 parts by weight retinyl palmitate, 0.5 to 5.0 parts by weight tocopheryl linoleate, 0.5 to 5.0 parts by weight lysine PCA, 0.5 to 5.0 parts by weight aloe extract, 0.5 to 5.0 parts by weight lauryl PCA, 0.5 to 5.0 parts by weight wheatgerm oil, 0.1 to 2.0 parts by weight evening primrose oil, 0.1 to 2.0 parts by weight ascorbyl polypeptide, 0.1 to 1.0 parts by weight imidazolidinyl urea, 0.1 to 1.0 part per weight phytantriol, 0.05 to 1.0 disodium EDTA, 0.05 to 1.0 part per weight BHA, 0.5 to 5.0 parts by weight sodium hyaluronate and 32.70 parts by weight water.

45. A composition according to Claim 44, comprising 7.5 to 12.0 parts by weight octyl methoxycinnamate, 8.0 to 10.0 parts by weight mineral oil, 5.0 to 10.0 parts by weight glycerin, 5.0 to 10.0 parts by weight melon extract, 5.0 to 10.0 parts by weight water / lecthin / superoxide dismutase composition, 4.0 to 9.0 parts by weight mixed fruit extract, 3.0 to 5.0 parts by weight gluceryl stearate and/or Peg-100 stearate, 3.8 parts by weight benzophenone-3, 2.5 to 5.0 parts by weight tocopheryl acetate, 2.0 to 5.0 parts by weight cetyl alcohol, 1.5 to 3.0 parts by weight sorbitol stearate, 1.0 to 3.0 parts by weight sorbitol stearate, 1.0 to 3.0 parts by weight peg-40 stearate, 1.0 to 3.0 parts by weight retinyl palmitate, 1.0 to 3.0 parts by weight tocopheryl linoleate, 1.0 to 3.0 parts by weight lysine PCA, 1.0 to 3.0 parts by weight aloe extract, 1.0 to 3.0 parts by weight lauryl PCA, 1.0 to 3.0

parts by weight wheatgerm oil, 0.5 to 1.5 parts by weight evening primrose oil, 0.4 to 1.0 part per weight ascorbyl polypeptide, 0.3 to 0.8 parts by weight imidazolidinyl urea, 0.2 to 0.5 parts by weight phytantriol, 0.1 to 0.3 disodium EDTA, 0.1 to 0.4 parts by weight BHA, 1.0 to 3.0 parts by weight sodium hyaluronate and 47.0 to 55.0 parts by weight water.

46. A composition according to Claim 44 or 45 further comprising methyl paraben or propyl paraben.

47. A composition according to any one of the preceding claims wherein at least one component is encapsulated in liposomes.

48. A composition according to Claim 47 wherein the component encapsulated in liposomes comprises retinyl palmitate, ascorbyl polypeptide or evening primrose oil.

49. A method of cosmetic treatment of skin comprising applying to skin a composition according to any one of the preceding claims.

50. A composition according to any one of Claims 1 to 48 for use as a medicament.

51. A composition according to Claim 50 for use in the treatment of damaged skin.

52. A skin care composition substantially as hereinbefore described.

53. A method of cosmetic treatment of skin substantially as hereinbefore described.

54. Any novel feature or combination of features described herein.





Application No: GB 9517711.9  
Claims searched: 1 to 53

Examiner: Mr S J Pilling  
Date of search: 14 November 1996

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A5B (BFE, BFH)

Int Cl (Ed.6): A61K 7/00, 7/42, 7/48

Other: ONLINE: CAS ONLINE, WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
P,X	WO 96/19180 A1 (MAYBELLINE) see Example 1 and page 23 lines 27 to 31.	1,10,22,33,49
X	WO 92/07587 A1 (NARHEX) see page 2 lines 19 to 22, page 6 line 4 to page 7 line 24 and page 10 lines 16 to 28 with reference to the " <i>typical cream or ointment composition</i> ".	1,4,5,9,10,12,16,18,22-30,32-39,49-51

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.